

What is claimed is:

1. An improved contact for error resistant coupling of electrical signals comprising:

5 a contact mating portion having selectively configured surface portions for slidably engaging a mating contact to continuously define an electric signal connection between the contact and the mating contact which being mated together includes:

10 a leading surface portion for initial engagement with the mating contact to produce an initial high resistance connection, and

a trailing surface portion for engagement with the mating contact when in a fully mated relationship to produce a relatively low resistance connection;

15 said leading surface portion being defined by a material having a resistance of at least 10KW; and

said trailing surface portion being defined by a conductive material.

20 2. The improved contact as described in claim 1 wherein said leading surface portion is contiguous with said trailing surface portion to define a continuous surface.

25 3. The improved contact as described in claim 1 further comprising an intermediate surface portion defined by a material of lower resistivity than said leading surface material;

wherein said mating contact sequentially engages said leading portion, said intermediate portion, and said trailing portion.

30 4. The improved contact as described in claim 3 wherein said intermediate surface portion is contiguous with said leading surface portion and said trailing surface portion to define a continuous surface.

5. The improved contact as described in claim 1 wherein said leading surface portion has decreasing thickness along the direction of sliding engagement.

6. The improved contact as described in claim 1 wherein said leading surface portion has decreasing resistivity along the direction of sliding engagement.

7. The improved contact as described in claim 2 wherein the leading portion material is inset in the trailing portion material.

8. The improved contact as described in claim 7 wherein said trailing portion material has a protrusion extending into said leading portion material.

9. The improved contact as described in claim 7 wherein said leading portion material has a protrusion extending into said trailing portion material.

10. The improved contact as described in claim 1 wherein said leading surface portion being defined by a material having a resistance between 10KW and 1GW.

11. An improved connector assembly for error resistive coupling of electrical signals comprising:

a first contact and a mating contact;

said first contact comprising:

a contact mating portion having selectively configured surface portions for slidably engaging said mating contact to continuously define an electric signal connection between said first contact and said mating contact which being mated together includes:

a leading surface portion for initial engagement with the mating contact to produce an initial high resistance connection, and

a trailing surface portion for engagement with the mating contact when in a fully mated relationship to produce a relatively low resistance connection;

said leading surface portion being defined by a material having a resistance of at least 10KW; and said trailing surface portion being defined by a conductive material.

5        12. The improved connector assembly as described in claim 11 wherein said leading surface portion is contiguous with said trailing surface portion to define a continuous surface.

10       13. The improved connector assembly as described in claim 11 further comprising an intermediate surface portion defined by a material of lower resistance than said leading surface material; wherein said mating contact sequentially engages said leading portion, said intermediate portion, and said trailing portion.

15       14. The improved connector assembly as described in claim 13 wherein said intermediate surface portion is contiguous with said leading surface portion and said trailing surface portion to define a continuous surface.

20       15. The improved connector assembly as described in claim 11 wherein said leading surface portion has decreasing thickness along the direction of sliding engagement.

25       16. The improved connector assembly as described in claim 11 wherein said leading surface portion has decreasing resistivity along the direction of sliding engagement.

30       17. The improved connector assembly as described in claim 12 wherein the leading portion material is inset in the trailing portion material.

18. The improved connector assembly as described in claim 17 wherein said trailing portion material has a protrusion extending into said leading portion material.

19. The improved connector assembly as described in claim 17 wherein said leading portion material has a protrusion extending into said trailing portion material.

5 20. The improved connector assembly as described in claim 11 wherein said leading surface portion being defined by a material having a resistance between 10KW and 1GW.

10 21. The improved connector assembly as described in claim 11 wherein said first contact has a housing; said leading surface portion is part of the housing and is electrically connected to said trailing portion.

15 22. The improved connector assembly as described in claim 11 wherein said first contact has a high resistive housing which makes contact with said trailing portion material; said leading surface portion is part of the housing.

20 23. The improved connector assembly as described in claim 11 wherein said first contact is made of an anisotropic resistive material with a high resistive portion and a low resistive portion;

25 said first contact surface portion being a part of said high resistive portion; and said second contact surface portion being a part of said low resistive portion.

24. An improved contact as described in claim 11 wherein said first contact has a housing; said leading surface portion is part of the housing and is electrically connected to said trailing portion.

30 25. An improved contact as described in claim 11 wherein said first contact has a high resistive housing which makes contact with said trailing portion material; said leading surface portion is part of the housing.

26. An improved contact as described in claim 11 wherein said first contact is made of an anisotropic resistive material with a high resistive portion and a low resistive portion;

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said first contact surface portion being a part of said high resistive portion; and

said second contact surface portion being a part of said low resistive portion.

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